



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-94B BYPASS RATIO: 8.3  
 UNIQUE ID NUMBER: 8GE100 PRESSURE RATIO ( $\pi_{00}$ ): 40.5  
 COMBUSTOR: DAC II  
 ENGINE TYPE: TF RATED THRUST ( $F_{00}$ ) (kN): 432.8

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.8	17.5	82.0	4.8
AS % OF ORIGINAL LIMIT	4.0	14.8	67.8	30.0
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			84.7	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			93.1	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			102.5	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			115.2	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
 - DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	3.514	0.04	0.12	56.41	3.7
CLIMB OUT	85	2.2	2.848	0.04	0.12	41.74	2.9
APPROACH	30	4.0	0.908	0.05	1.07	17.38	3.2
IDLE	7	26.0	0.296	0.41	12.69	6.09	2.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1203	221	6156	30617	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.5	14.2	70.8	3.7
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.0	0.4	0.3	0.7
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.47-0.53	13.83-14.49	70.43-70.92	2.89-4.29

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.3-98.2
TEMPERATURE (K)	279.1-281.6
ABS HUMIDITY (kg/kg)	0.0022-0.0064

### FUEL

SPEC	Jet A
H/C	1.92
AROM (%)	17.4

MANUFACTURER: General Electric Company  
 TEST ORGANIZATION: GE90 Eval Engineering  
 TEST LOCATION: Site IIID, PTO, Peebles, OH  
 TEST DATES: 09/01/2000-12/01/2000

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

### REMARKS

1. Ref. GE Report R97AEB298,
2. Engine S/N 900326
3. Turbomachinery incorporating 3D aero
4. Characteristic D<sub>p</sub>/F<sub>00</sub> NO<sub>x</sub> incorrectly entered originally [6GE091]
5. Issue 15: D<sub>p</sub>/F<sub>00</sub> NO<sub>x</sub> corrected from 83.2 to 82.0 and % of standards recalculated as well
6. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
7. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements: -

('x' if complies, 'PR' if pre-regulation, '-' if information is not available)